

# Landowner Incentive Program

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## Application Guidelines



**May 1, 2006**

**Postmark Deadline for Prairie & Savanna Projects**

Download Application Materials at <http://dnr.wi.gov/org/land/er/wlip>

Mail Application to:

Landowner Incentive Program Coordinator, ER/6  
Department of Natural Resources  
101 S. Webster St., Box 7921  
Madison, WI 53707-7921

March 2006

## **Introduction**

The Landowner Incentive Program (LIP) provides grants and technical support to private landowners to manage and restore habitat for at-risk (rare) species on their land. The program provides up to 75% of the cost for eligible projects. LIP is funded by the U.S. Fish and Wildlife Service and administered by the Wisconsin Department of Natural Resources Bureau of Endangered Resources.

Any individuals or group may apply for LIP funding and assistance, however projects must take place on privately (non-government) owned land. Habitat management or restoration on public land is not eligible for LIP assistance. Potential LIP projects include, but are not limited to, conducting prescribed burns, restoring native vegetation, and removing invasive and woody species to benefit at-risk species. Projects must also occur in one of the LIP identified priority areas described later in this request for proposals.

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## **Application Deadlines**

2006 applications must be postmarked by:

May 1, 2006 for the Prairie and Savanna Projects  
To be determined for the Northern Lake Michigan Coastal Ecological Landscape

## **Who Can Apply for LIP Grants?**

Individuals or groups (i.e., land conservancies or trusts, watershed councils, community organizations, or conservation organizations), proposing projects that will take place on privately (non-government) owned land may apply. Applicants who do not hold title to the land on which their proposed LIP project will occur must identify the proper legal landowner(s) who have confirmed their intent to participate in the project.

## **What types of projects are eligible?**

Projects that restore or enhance habitat on private land for the benefit of at-risk species are eligible. Eligible projects under LIP in the spring of 2006 are prairie and savanna projects that include, but are not limited to, conducting prescribed burns, planting native vegetation, and removing invasive and woody species.

To be eligible for LIP funds, proposals must meet the following requirements:

- Projects must be on private (non-government owned) land
- Proposals must benefit an at-risk species that occupies the property or habitat within ½ mile of the property
- Projects must be within LIP priority areas

### What is an At-risk Species?

Wisconsin's at-risk species are those that are considered rare in the state. These include species listed as:

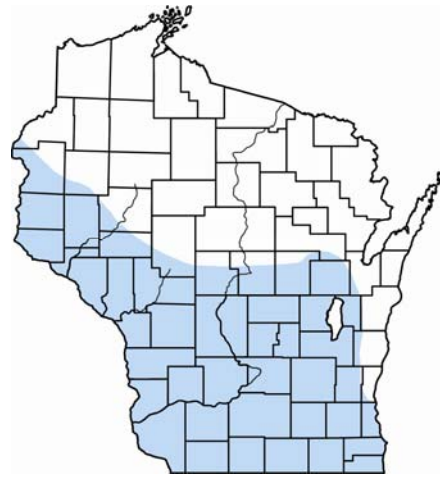
- Endangered or Threatened at the state or federal level
- State Special Concern Species
- Species of Greatest Conservation Need

A list of at-risk species can be found on the web site (<http://dnr.wi.gov/org/land/er/WLIP>) or by contacting program staff for the two current LIP priority areas: prairie and savanna habitat and the northern Lake Michigan coastal ecological landscape.

### What are the priority areas?

The program has funding to implement the program in two areas that have lost a significant amount of habitat and also harbor many rare species. The applications for Prairie and Savanna projects are due May 1, 2006. The northern Lake Michigan deadline will be determined after the biologist is hired for that area.

**Prairie and Savanna Habitat** that is found in the southwestern 2/3 of the state. Only about 500 acres of oak savanna and 8,000 acres of original prairie remain. The remaining habitat may be the last refuge for many prairie and savanna plants, birds and other animals.



**Northern Lake Michigan Coastal Ecological Landscape** that includes coastal wetlands, dune habitat, and other habitat for at-risk species. This landscape also includes Door County Peninsula, which harbors one of the highest concentrations of rare species in the state. Many of these species and natural communities are uncommon or nonexistent elsewhere in Wisconsin and throughout the US.

### **How are LIP Matching Funds Accrued?**

The landowner match (or share) is the portion of the total project cost contributed by the landowner. The landowner is responsible for at least 25% of total project costs. The match can include money from non-federal sources or in-kind match such as labor, supplies, and equipment donated by the landowner or organizations working with the landowner. Landowners are encouraged to partner with other landowners or conservation groups to reduce out-of-pocket (cash) contributions for their project. Matching fund expenditures must be made in accordance with the grant effective dates specified in the project's grant agreement.

Donated labor, supplies or equipment as part of the landowner match are subject to the following provisions:

1. All sources of the landowner match must be indicated in the grant application.
2. The hourly value of donated labor is \$12 per hour.
3. The value of donated materials shall conform to market rates.

### **How Much LIP Money May Be Requested?**

Each application may request up to \$25,000 in LIP grant funds. There is no minimum allowable request. Funding is contingent on availability.

### **How are LIP Funds Distributed?**

LIP funds are distributed on a reimbursement basis. All project expenditures must be made in accordance with the project effective dates specified in the grant agreement. Successful applicants will be provided with written guidance on how to keep financial records to be eligible for reimbursement.

Common mistakes made in keeping records include:

1. Missing a photocopy of an invoice.
2. Missing a photocopy of a canceled check (it does not count if the photocopy is of a check before it cleared the bank) or other record showing the check was canceled.
3. Didn't submit a final project report, or the final report has not yet been approved.
4. Inadequate documentation of volunteer labor.
5. Did not list all the costs (donated costs and out-of-pocket costs) to earn the full grant amount. For example, to earn a \$10,000 grant, you must list \$13,334 of eligible, documented project costs -  $\$13,334 \times 75\% = \$10,000$ .
6. Claimed the same cost twice.

### **How Will Proposals Be Selected?**

The Landowner Incentive Program biologist(s) will review applications to ensure that their projects meet the minimum necessary eligibility requirements and to conduct the initial evaluation. The program's Guidance Team (a group of representatives from governmental and non-governmental organizations) will then evaluate the applications and make final recommendations for funding. The criteria found in Appendix A of this document will be used as guidance for evaluating applications.

DNR staff will ensure all recommended proposals comply with state and federal laws including, but not limited to, the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA). Landowners whose projects are not funded are encouraged to discuss their applications with LIP staff and resubmit at a later time (as early as the following year if feasible).

### **What Happens after My Proposal is Funded?**

Applicants will be notified of their funding status shortly after the review process is complete. Applicants with approved projects will work with a LIP biologist to finalize details of the project and complete a management plan if one is not included in the application. The final management plan must be completed prior to signing the grant agreement between the DNR and the landowner.

The grant agreement is signed by the department and the landowner. It outlines the approved project scope, time period and budget. The grant agreement is for a ten year period to keep the practices funded by the program in place. This agreement, however, is not a deed restriction and can be tailored to accommodate the needs of individual landowners. **Read your grant agreement carefully. It contains conditions that govern your project.** The landowner will retain one signed copy and send one signed copy to the program coordinator within 30 days.

**Important: Costs incurred prior to the beginning date of the grant agreement will not be eligible for reimbursement.**

#### **What are My Responsibilities if My Project is Funded?**

At the time you receive your grant agreement, you will also receive information on financial administration during your project, what to do if your project requires changes, and how to request reimbursement of project expenditures after completion of your project. The financial responsibility for a grant can't be passed to another entity. The financial records should be maintained according to the grant agreement and will also include time and labor contributed by the landowner or a partner organization. In general, your accounting for project costs must be in conformance with generally accepted accounting practices, you must maintain good records and documentation, and all of your financial records are subject to audit and must be kept and made available for inspection for 3 years after final grant payment.

The landowner has three years to complete the project or request an extension. Funded projects must submit annual progress reports by May 1 of each year and a final report within 60 days of the project's end date as specified in the grant agreement. The final report describes the project's results as they relate to the project objectives. Program staff must approve the final report before you may receive your reimbursement payment.

#### **How Do I Apply?**

Interested landowners can receive the application by either downloading them from the web site or by contacting the program coordinator. The application materials will include details on the evaluation process, application deadline and anticipated award date of the grant. Completed applications must be post-marked by the announced deadline.

## APPLICATION INSTRUCTIONS

Before filling out your application, please thoroughly review the application instructions, evaluations guidance (located in the Appendix A), and contact your LIP biologist at any time if you have questions or need clarification of any requirement.

Your completed application must be submitted to the Landowner Incentive Program coordinator no later than the published deadlines. The complete application includes the Landowner Incentive Program Grant Application (Form 1700-059) and any additional attachments such as aerial photographs, or management plans.

### Project Summary

Give a descriptive title that describes your project in 10 words or less. References to the local area or features are encouraged.

Include the date submitted and the amount requested from the Landowner Incentive Program (not the total project cost).

### Landowner Information

The landowner must be a private, non-governmental, individual or an organization such as a land trust. For organizations, be sure that the name on the grant application is the organization's official name. If multiple landowners are applying, attach an additional sheet with their names, addresses and contact information.

### Applicant Information

The applicant will be the primary contact for the proposal. This may be the landowner or an organization working on behalf of the landowner(s). For projects with multiple landowners, identify which landowner will be the primary contact for the grant here. Applicants working on behalf of the landowner(s) must have approval from each landowner.

### Project Location

Provide the location of the project including the county, civil township name, township range, section (s), and, if applicable, quarter section and quarter/quarter section. Maps and air photos are helpful and may also be attached.

### Project Information

The program is active in two priority areas: prairie and savanna habitat and the northern Lake Michigan coastal ecological landscape. Maps of these two areas can be found on page 2 of these guidelines. If you have questions, contact the LIP biologist or coordinator or visit the web site at <http://dnr.wi.gov/org/land/er/WLIP>.

Identify the appropriate priority area, the habitat type, project acreage and project type according to the description in the application.

List the at-risk species that will benefit from the project. Identify which species are in the project area and those found within ½ mile of the project area. At-risk species are those that are listed as endangered or threatened at the state and federal level, state special concern species or species of greatest conservation need.

#### Example:

Within the project area: Red-headed woodpecker (Special Concern)

The list of at-risk species for both priority areas is included in Appendix B and C of these guidelines. For additional information, visit the program's web site at <http://dnr.wi.gov/org/land/er/WLIP> or contact the program coordinator or biologist for your area.

For information on the distribution of rare species, visit the Natural Heritage Inventory Portal at [http://dnr.wi.gov/org/land/er/nhi/nhi\\_ims/onlinedb.htm](http://dnr.wi.gov/org/land/er/nhi/nhi_ims/onlinedb.htm). Additional information on rare species can be found on the following sites:

- Wisconsin's Natural Heritage Inventory Working List  
[http://dnr.wi.gov/org/land/er/working\\_list/taxalists/](http://dnr.wi.gov/org/land/er/working_list/taxalists/)
- The Wisconsin Breeding Bird Atlas  
<http://www.uwgb.edu/birds/wbba/>
- Atlas of the Wisconsin Prairie and Savanna Flora  
<http://www.botany.wisc.edu/herbarium/info/psatlas.asp>

### **Description of Project Site**

By providing the relevant background information requested, reviewers of your application will fully appreciate the history and context of your land. In addition, one of the goals of the Landowner Incentive Program is to complement other conservation programs without duplicating their efforts.

Please indicate whether your land or adjacent land has been enrolled in other private landowner programs such as:

- Conservation Reserve Enhancement Program (CREP)
- Conservation Reserve Program (CRP)
- Grassland Reserve Program (GRP)
- Managed Forest Law (MFL)
- Partners for Fish and Wildlife (PFW)
- Turkey Stamp, Pheasant Stamp or Duck Stamp projects
- Wetlands Reserve Program (WRP)
- Wildlife Habitat Incentives Program (WHIP)

### **Goals, Need and Objectives**

Identify the goals, needs and objectives of the project. The goal is the ultimate outcome of the project and how it will benefit at-risk species. For the need, explain why the project is being undertaken and what problem the project will address. Objectives should explain what is to be accomplished during the period of the project. These should be measurable and included in the final report and monitoring plan for the project.

Applicants with approved projects will work with a LIP biologist to finalize details of the project and complete a management plan if one is not included in the application. The final management plan must be completed prior to signing the grant agreement between the DNR and the landowner.

#### Example #1:

- Goal: To increase the population of Eastern Prairie Fringed Orchid in the wet prairie.
- Need: There is a need to reduce deer predation on orchids and to improve the quality of orchid habitat.
- Objectives:
  1. Prevent deer predation by erecting a fence around 4 acres of orchid habitat.
  2. Decrease reed canary grass by 75% by spraying 1 acre of orchid habitat.
  3. Remove all adjacent ash trees within 100 feet of orchid habitat.

#### Example #2:

- Goal: Increase the quality of oak savanna habitat on 30 acres to improve habitat for Red-headed woodpecker.
- Need: There is a need to remove invasive shrubs and trees from a 30 acre oak savanna.

Example #2 continued:

Objectives:

1. Remove all buckthorn and honeysuckle on 30 acres.
2. Remove all red cedar trees on 30 acres.
3. Establish 1,000 feet of firebreak.
4. Conduct one prescribed burn on 15 acres.

**Work Plan**

The work plan details how the objectives will be attained. Include specific procedures, methods, timelines and how partners or volunteers will be involved if applicable.

Example #1:

October 2006

Landowner will erect a deer proof fence around 4 acres of orchid habitat.

October 2006

Contractor will spot spray canary grass with herbicide.

November 2006 – February 2007

Contractor will cut and remove ash trees within 100 feet of orchid habitat. Cut stumps will be treated with herbicide.

Example #2:

November 2006 – February 2007

Contractor will remove all buckthorn and honeysuckle from. All cut stems will be treated. Cut stems will be burned on piles.

December 2006 - February 2007

Landowner will cut, pile and burn all red cedar trees.

October 2006 – March 2007

Contractor will construct 1,000 feet of firebreak on the east and south side of the burn unit by removing all dead and down wood within 50 feet of the firebreak.

October –November 2007

Contractor will conduct a prescribed burn of the 15 acres.

**Follow-up and Evaluation**

The evaluation of the project's success will be reported to the Department in the final report. Describe the methods used to evaluate the project's success for the final report as well as any on-going evaluation that will occur when the project is completed. The evaluation should describe to what degree the project objectives were achieved.

Also describe any maintenance that will be necessary following the project completion.

Example #1:

Project Evaluation:

1. Fencing to prevent deer predation erected around 4.5 acres of orchid habitat.
2. Reed canary grass in one acre of orchid habitat was sprayed in October 2006. Site inspection in August 2007 confirmed that reed canary grass cover was reduced by 70-75%.
3. Ash trees within 120 feet of orchid habitat were removed.

Follow-up:

Orchids will be counted every year in early July from 2006-2011.

Reed canary grass cover will be estimated from 2006-2011.



Example #2:

Project Evaluation:

1. All buckthorn and honeysuckle were removed from 30 acres.
2. All red cedar were removed from 30 acres.
3. 1,000 feet of firebreak was established.
4. One prescribed burn was conducted on 15 acres.

Follow-up:

Inspect the area once every summer from 2007-2013 to evaluate changes to the ground layer vegetation and numbers of shrubs.

Landowner will spot treat any shrubs that resprout from 2007-2013.

Red-headed woodpecker activity was monitored prior to project and will continue to be monitored from 2007-2013. The pre- and post-project activity will be compared and shared with program staff.

**Budget**

All costs associated with the project should be included here including details on how the minimum 25% landowner share of the project cost will be met. The example below has a detailed budget and an overall budget. The detailed budget shows how much money will be spent for each part of the project including site preparation, seed purchase, planting, mowing, herbiciding and removal of invasive and woody species.

The overall budget provides the same information and also shows how the match will be met. Project costs are divided into three categories: LIP funds requested, Landowner/Partner funds contributed and In-kind match. Enter your projected costs for each category. Most projects won't have costs in all categories. The budget provided on the application is an example and other lines can be added as appropriate.

Landowners may donate labor or work with volunteers who are donating labor. **The value of donated labor is \$12 per hour.**

For planting projects, DNR staff are available to help secure seed to meet the goals of your project. We only pay for purchasing pure live seed that has been tested for purity and germination to ensure that the seed is viable. However, the program will pay for or count as volunteer time seed collecting and processing. We also recommend using local genotype plants and seeds.

All costs associated with the program require documentation that meets state and federal standards. This includes both the costs submitted for reimbursement by the program and costs used as part of the minimum 25% landowner match. Program staff will provide specific guidance to landowners on how to meet these requirements if their projects are funded. Examples of documentation include invoices, time sheets, or payroll records.

Example Budget - Plant 10 acres of prairie

**Detailed budget:**

	<u>\$ Amount</u>	<u>Time</u>
Site preparation		\$300 (25 hours at \$12/hour)
Seed purchase	\$2,000	
Planting- contracted	\$250	
1 <sup>st</sup> Year mowing- contracted	\$250	
<b>Total project cost</b>	<b>\$2,800</b>	
<b>Total cash needed</b>	<b>\$2,500</b>	
<b>Required 25% match</b>	<b>\$700</b>	
- in-kind	<b>\$300</b>	
- cash	<b>\$400</b>	

**Overall Budget**

	Project Costs		
	LIP Funds Requested	Landowner/ Partner funds contributed	In-kind (Landowner or partner time)
Contracting services for planting and 1 <sup>st</sup> year mowing	\$500		
Supplies - Seed ( <i>i.e. herbicide or seed</i> )	\$1600	\$400	
Equipment rental charges			
In- kind match @ \$12/hr for 25 hours for site preparation ( <i>from landowner or partner</i> )			\$300
Other costs ( <i>specify</i> )			
<b>Subtotals</b> ( <i>sum each column</i> )	\$2100	\$400	\$300
<b>Total Project Cost Estimate</b> ( <i>sum of subtotals for column 1, column 2 and column 3</i> )	\$2800		
What is the total percent match provided by the landowner and/or partner group? ( <i>add landowner/partner funds contributed to in-kind match and divide by total project cost</i> )	25%		
What is the <i>total</i> cost per acre? ( <i>total cost divided by acreage</i> )	\$280/acre		

**Landowner(s)/Applicant Signatures**

The landowner(s) must sign all applications even when a partner organization is submitting the application. For projects with multiple landowners, each landowner must also sign the application. The applicant, if different from the landowner and acting on behalf of the landowner, must also sign the application.

**For Department Use Only**

The DNR will record the project eligibility, score, award status and date as well as comments and an explanation of the funding decision. A copy of this document will then be returned to you for your records.

## APPENDIX A

The following criteria will be used as guidance for evaluating applications. They are arranged in descending order of priority. In addition, applications will be evaluated to ensure that the expected benefits to at-risk species are reasonable, and that the project is likely to success based on the project objectives, methods, budget, work plan, monitoring plan and the capacity of the grantee.

1. How many at-risk species present or within 1/2 mile will benefit from the proposed work?
2. What is the highest status of the species currently on the property that will benefit from the proposed project?
3. Is the proposed project located within or within 1/2 mile of a project area of the DNR, federal or local unit of government, a land trust or other conservation group?
4. How large is the proposed project area?  
For example: > 40 acres  
20-40 acres  
10-20 acres  
0-5 acres
5. Is this an enhancement, restoration project or both? Or is it a habitat creation project?  
For example: Both enhancement and restoration; restoration will buffer existing habitat  
Enhancement of existing habitat (i.e. brush removal on a native prairie remnant)  
Restoration (i.e. creation of habitat such as planting prairie on existing agricultural land)  
Creation of habitat (i.e. planting prairie in previously forested area)
6. What is the current level of protection (i.e. easement)?  
For example: Permanent protection  
10-30 year agreement  
None
7. What is the cost per acre?  
For example: < \$300/acre  
\$300-500/acre  
> \$500/ acre
8. What is the percentage of non-federal match?  
For example: >50% match  
30-50% match  
25% match

**9. How many adjoining properties are participating in the proposal?**

For example:    > 3 landowners  
                      2-3 landowners  
                      One landowner (i.e. the applicant)

**10. Will the project complement other habitat management in the area? For instance, is the property or adjacent property enrolled in other private landowner programs, is the project near other managed habitat, is the project adjacent to protected land such as a State Natural Area, state or county park, or otherwise protected land?**

**11. What is the highest status of the species within 1/2 mile that will benefit from the proposed project?**

## APPENDIX B

### At-Risk Species - PRAIRIE AND SAVANNA HABITAT

Taxa	Common Name	Scientific Name	State and Federal Status
<b>Birds</b>	Bell's Vireo	<i>Vireo bellii</i>	Threatened
	Blue-winged Warbler	<i>Vermivora pinus</i>	Sp. of Greatest Cons. Need
	Bobolink	<i>Dolichonyx oryzivorus</i>	Special Concern
	Brown Thrasher	<i>Toxostoma rufum</i>	Sp. of Greatest Cons. Need
	Dickcissel	<i>Spiza americana</i>	Special Concern
	Eastern Meadowlark	<i>Sturnella magna</i>	Special Concern
	Field Sparrow	<i>Spizella pusilla</i>	Special Concern
	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Special Concern
	Greater Prairie-Chicken	<i>Tympanuchus cupido</i>	Threatened
	Henslow's Sparrow	<i>Ammodramus henslowii</i>	Threatened
	Lark Sparrow	<i>Chondestes grammacus</i>	Special Concern
	Le Conte's Sparrow	<i>Ammodramus leconteii</i>	Special Concern
	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Endangered
	Northern Bobwhite	<i>Colinus virginianus</i>	Sp. of Greatest Cons. Need
	Northern Harrier	<i>Circus cyaneus</i>	Special Concern
	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Special Concern
	Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	Special Concern
	Short-eared Owl	<i>Asio flammeus</i>	Special Concern
	Upland Sandpiper	<i>Bartramia longicauda</i>	Special Concern
	Vesper Sparrow	<i>Poocetes gramineus</i>	Special Concern
	Western Meadowlark	<i>Sturnella neglecta</i>	Special Concern
	Whip-poor-will	<i>Caprimulgus vociferus</i>	Sp. of Greatest Cons. Need
	Willow Flycatcher	<i>Empidonax traillii</i>	Sp. of Greatest Cons. Need
	Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern
<b>Herptiles</b>	Black Rat Snake	<i>Elaphe obsoleta</i>	Special Concern
	Bullsnake	<i>Pituophis catenifer sayi</i>	Special Concern
	Eastern Massasauga Rattlesnake	<i>Sistrurus catenatus catenatus</i>	Endangered
	Northern Prairie Skink	<i>Eumeces septentrionalis</i>	Sp. of Greatest Cons. Need
	Ornate Box Turtle	<i>Terrapene ornata</i>	Endangered
	Pickerel Frog	<i>Rana palustris</i>	Special Concern
	Prairie Racerunner	<i>Cnemidophorus sexlineatus virdis</i>	Sp. of Greatest Cons. Need
	Prairie Ringneck Snake	<i>Diadophis punctatus arnyi</i>	Special Concern
	Queen Snake	<i>Regina septemvittata</i>	Endangered
	Timber Rattlesnake	<i>Crotalus horridus</i>	Special Concern
	Western Ribbon Snake	<i>Thamnophis proximus</i>	Endangered
	Western Slender Glass Lizard	<i>Ophisaurus attenuatus</i>	Endangered
	Western Worm Snake	<i>Carphophis amoenus</i>	Special Concern
	Wood Turtle	<i>Clemmys insculpta</i>	Threatened
	Yellow-bellied Racer	<i>Coluber constrictor</i>	Special Concern
<b>Mammals</b>	Eastern Red Bat	<i>Lasiurus borealis</i>	Sp. of Greatest Cons. Need
	Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>	Special Concern
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Special Concern
	Prairie Vole	<i>Microtus ochrogaster</i>	Special Concern

<b>Mammals</b>	White-tailed Jackrabbit	<i>Lepus townsendii</i>	Special Concern
	Woodland Vole	<i>Microtus pinetorum</i>	Special Concern
<b>Plants</b>	American Fever-few	<i>Parthenium integrifolium</i>	Threatened
	Brittle Prickly-pear	<i>Opuntia fragilis</i>	Threatened
	Buttonweed	<i>Diodia teres</i> var. <i>teres</i>	Special Concern
	Canada Mountain-ricegrass	<i>Oryzopsis canadensis</i>	Special Concern
	Carolina Anemone	<i>Anemone caroliniana</i>	Endangered
	Cleft Phlox	<i>Phlox bifida</i>	Special Concern
	Clustered Broomrape	<i>Orobanche fasciculata</i>	Threatened
	Clustered Poppy-mallow	<i>Callirhoe triangulata</i>	Special Concern
	Dotted Blazing Star	<i>Liatris punctata</i> var. <i>nebraskana</i>	Endangered
	Dragon Wormwood	<i>Artemisia dracunculus</i>	Special Concern
	Dwarf Milkweed	<i>Asclepias ovalifolia</i>	Threatened
	Earleaf Foxglove	<i>Tomanthera auriculata</i>	Special Concern
	Early Anemone	<i>Anemone multifida</i> var. <i>hudsoniana</i>	Endangered
	Eastern Prickly-pear	<i>Opuntia humifusa</i>	Special Concern
	Great Indian-plantain	<i>Cacalia muehlenbergii</i>	Special Concern
	Ground-plum	<i>Astragalus crassicaupus</i>	Endangered
	Hairy Beardtongue	<i>Penstemon hirsutus</i>	Special Concern
	Hairy Fimbristylis	<i>Fimbristylis puberula</i>	Endangered
	Hairy Wild-petunia	<i>Ruellia humilis</i>	Endangered
	Hill's Thistle	<i>Cirsium hillii</i>	Threatened
	Hoary Tick-treefoil	<i>Desmodium canescens</i>	Special Concern
	James Cristatella	<i>Polanisia jamesii</i>	Special Concern
	Kitten Tails	<i>Besseya bullii</i>	Threatened
	Lanced-leaved Buckthorn	<i>Rhamnus lanceolata</i> var. <i>glabrata</i>	Special Concern
	Louisiana Broomrape	<i>Orobanche ludoviciana</i>	Endangered
	Marbleseed	<i>Onosmodium molle</i>	Special Concern
	Mullein Foxglove	<i>Dasistoma macrophylla</i>	Special Concern
	Narrow-leaved Vervain	<i>Verbena simplex</i>	Special Concern
	Nodding Rattlesnake-root	<i>Prenanthes crepidinea</i>	Endangered
	October Lady's-tresses	<i>Spiranthes ovalis</i> var. <i>erostellata</i>	Special Concern
	Ohio Goldenrod	<i>Solidago ohioensis</i>	Special Concern
	Pale Beardtongue	<i>Penstemon pallidus</i>	Special Concern
	Pale False Foxglove	<i>Agalinis skinneriana</i>	Endangered
	Pale-purple Coneflower	<i>Echinacea pallida</i>	Threatened
	Pink Milkwort	<i>Polygala incarnata</i>	Endangered
	Pointed Blue-eyed-grass	<i>Sisyrinchium angustifolium</i>	Special Concern
	Prairie Bush-clover	<i>Lespedeza leptostachya</i>	Endangered (Federal Thr.)
	Prairie False-dandelion	<i>Nothocalais cuspidata</i>	Special Concern
	Prairie Fame-flower	<i>Talinum rugospermum</i>	Special Concern
	Prairie Indian Plantain	<i>Cacalia tuberosa</i>	Threatened
	Prairie Milkweed	<i>Asclepias sullivantii</i>	Threatened
	Prairie Parsley	<i>Polytaenia nuttallii</i>	Threatened
	Prairie Ragwort	<i>Senecio plattensis</i>	Special Concern
	Prairie Sagebrush	<i>Artemisia frigida</i>	Special Concern
	Prairie Turnip	<i>Pedimelum esculentum</i>	Special Concern
	Prairie White-fringed Orchid	<i>Platanthera leucophaea</i>	Endangered (Federal Thr.)

<b>Plants</b>	Purple Meadow-parsnip	<i>Thaspium trifoliatum</i> var. <i>flavum</i>	Special Concern
	Purple Milkweed	<i>Asclepias purpurascens</i>	Endangered
	Richardson Sedge	<i>Carex richardsonii</i>	Special Concern
	Rock Stitchwort	<i>Minuartia dawsonensis</i>	Special Concern
	Rough Rattlesnake-root	<i>Prenanthes aspera</i>	Endangered
	Roundfruit St. John's-wort	<i>Hypericum sphaerocarpum</i>	Threatened
	Roundstem Foxglove	<i>Agalinis gattingeri</i>	Threatened
	Shadowy Goldenrod	<i>Solidago sciaphila</i>	Special Concern
	Shinners Three-awned Grass	<i>Aristida dichotoma</i>	Special Concern
	Silky Prairie-clover	<i>Dalea villosa</i>	Special Concern
	Silvery Scurf Pea	<i>Pedimelum argophyllum</i>	Special Concern
	Slender Bush-clover	<i>Lespedeza virginica</i>	Threatened
	Small Skullcap	<i>Scutellaria parvula</i> var. <i>parvula</i>	Endangered
	Small-flowered Woolly Bean	<i>Strophostyles leiosperma</i>	Special Concern
	Smooth Phlox	<i>Phlox glaberrima</i> ssp. <i>interior</i>	Endangered
	Swan Sedge	<i>Carex swanii</i>	Special Concern
	Sweet-scented Indian-plantain	<i>Cacalia suaveolens</i>	Special Concern
	Torrey Sedge	<i>Carex torreyi</i>	Special Concern
	Violet Bush-clover	<i>Lespedeza violacea</i>	Special Concern
	Wilcox Panic Grass	<i>Panicum wilcoxianum</i>	Special Concern
	Woolly Milkweed	<i>Asclepias lanuginosa</i>	Threatened
	Yellow Evening Primrose	<i>Calylophus serrulatus</i>	Special Concern
	Yellow Gentian	<i>Gentiana alba</i>	Threatened
	Yellow Giant Hyssop	<i>Agastache nepetoides</i>	Threatened
	Yellow Wild-indigo	<i>Baptisia tinctoria</i>	Special Concern
<b>Invertebrates</b>	Abbreviated Underwing Moth	<i>Catocala abbreviatella</i>	Special Concern
	Karner blue butterfly	<i>Lycaeides melissa samuelis</i>	Special Concern (Fed. End.)
	Liatris Borer Moth	<i>Papaipema beeriana</i>	Special Concern
	Net-veined Leafhopper	<i>Polyamia dilata</i>	Threatened
	Ottoo Skipper	<i>Hesperia ottoe</i>	Special Concern
	Red-tailed Prairie Leafhopper	<i>Aflexia rubranura</i>	Endangered
	Regal Fritillary	<i>Speyeria idalia</i>	Endangered
	Silphium Borer Moth	<i>Papaipema silphii</i>	Endangered
	Whitney's Underwing Moth	<i>Catocala whitneyi</i>	Special Concern



## APPENDIX C

### At-Risk Species -

### NORTHERN LAKE MICHIGAN COASTAL ECOLOGICAL LANDSCAPE

Taxa	Common Name	Scientific Name	State and Federal Status
<b>Birds</b>	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Special Concern (Fed. Thr.)
	Caspian Tern	<i>Sterna caspia</i>	Endangered
	Common Tern	<i>Sterna hirundo</i>	Endangered
	Forster's Tern	<i>Sterna forsteri</i>	Endangered
	Great Egret	<i>Ardea alba</i>	Threatened
	Henslow's Sparrow	<i>Ammodramus henslowii</i>	Threatened
	Hooded Warbler	<i>Wilsonia citrina</i>	Threatened
	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Endangered
	Osprey	<i>Pandion haliaetus</i>	Threatened
	Piping Plover	<i>Charadrius melodus</i>	Endangered (Federal End.)
	Red-necked Grebe	<i>Podiceps grisegena</i>	Endangered
	Red-shouldered Hawk	<i>Buteo lineatus</i>	Threatened
	Yellow Rail	<i>Coturnicops noveboracensis</i>	Threatened
<b>Invertebrates</b>	Northern Blue Butterfly	<i>Lycaeides idas nabokovi</i>	Endangered
	Swamp Metalmark	<i>Calephelis muticum</i>	Endangered
	Hine's Emerald	<i>Somatochlora hineana</i>	Endangered (Federal End.)
	Pygmy Snaketail	<i>Ophiogomphus howei</i>	Threatened
	Greater Redhorse	<i>Moxostoma valenciennesi</i>	Threatened
	Longear Sunfish	<i>Lepomis megalotis</i>	Threatened
	Pugnose Shiner	<i>Notropis anogenus</i>	Threatened
	Redfin Shiner	<i>Lythrurus umbratilis</i>	Threatened
	Striped Shiner	<i>Luxilus chrysocephalus</i>	Endangered
<b>Herptiles</b>	Lake Huron Locust	<i>Trimerotropis huroniana</i>	Endangered
	Blanchard's Cricket Frog	<i>Acris crepitans blanchardi</i>	Endangered
	Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened
	Northern Ribbon Snake	<i>Thamnophis sauritus</i>	Endangered
<b>Mussels</b>	Wood Turtle	<i>Clemmys insculpta</i>	Threatened
	Buckhorn	<i>Tritogonia verrucosa</i>	Threatened
	Salamander Mussel	<i>Simpsonaias ambigua</i>	Threatened
	Slippershell Mussel	<i>Alasmidonta viridis</i>	Threatened
<b>Plants</b>	Snuffbox	<i>Epioblasma triquetra</i>	Endangered
	Beautiful Sedge	<i>Carex concinna</i>	Threatened
	Broad-leaf Sedge	<i>Carex platyphylla</i>	Special Concern
	Canada yew	<i>Taxus canadensis</i>	Special Concern
	Climbing fumitory	<i>Adlumia fungosa</i>	Special Concern
	Coast Sedge	<i>Carex exilis</i>	Threatened
	Cooper's Milk Vetch	<i>Astragalus neglectus</i>	Endangered
	Crawe's sedge	<i>Carex crawei</i>	Special Concern
	Drooping Sedge	<i>Carex prasina</i>	Threatened
	Dune Thistle	<i>Cirsium pitcheri</i>	Threatened (Federal Thr.)
	Dwarf Lake Iris	<i>Iris lacustris</i>	Threatened (Federal Thr.)
	Elk Sedge	<i>Carex garberi</i>	Threatened
	Fairy Slipper	<i>Calypso bulbosa</i>	Threatened
	Foamflower, False Miterwort	<i>Tiarella cordifolia</i>	Endangered
	Giant Pinedrops	<i>Pterospora andromedea</i>	Endangered

<b>Plants</b>	Green Spleenwort	<i>Asplenium viride</i>	Endangered
	Handsome Sedge	<i>Carex formosa</i>	Threatened
	Hawthorn-leaved Gooseberry	<i>Ribes oxycanthoides</i>	Threatened
	Lake Huron Tansy	<i>Tanacetum huronense</i>	Endangered
	Lake-cress	<i>Armoracia lacustris</i>	Endangered
	Lanceolate Whitlow-cress	<i>Draba lanceolata</i>	Endangered
	Low calamint	<i>Calamintha arkansana</i>	Special Concern
	Low Spike-moss	<i>Selaginella selaginoides</i>	Endangered
	Marsh bedstraw	<i>Galium palustre</i>	Special Concern
	Moonwort Grape-fern	<i>Botrychium lunaria</i>	Endangered
	Northern Comandra	<i>Geocaulon lividum</i>	Endangered
	Northern wild raisin	<i>Viburnum nudum</i>	Special Concern
	Pale Green Orchid	<i>Platanthera flava</i> var. <i>herbiola</i>	Threatened
	Purple False Oats	<i>Trisetum melicoides</i>	Endangered
	Ram's-head Lady's Slipper	<i>Cypripedium arietinum</i>	Threatened
	Round-leaved Orchis	<i>Amerorchis rotundifolia</i>	Threatened
	Sand Reed-grass	<i>Calamovilfa longifolia</i> var. <i>magna</i>	Threatened
	Seaside Crowfoot	<i>Ranunculus cymbalaria</i>	Threatened
	Slenderleaf Sundew	<i>Drosera linearis</i>	Threatened
	Small Yellow Water Crowfoot	<i>Ranunculus gmelinii</i>	Endangered
	Small-flowered Grass-of-Parnassus	<i>Parnassia parviflora</i>	Endangered
	Snow Trillium	<i>Trillium nivale</i>	Threatened
	Squarestem Spike-rush	<i>Eleocharis quadrangulata</i>	Endangered
	Sticky False-asphodel	<i>Tofieldia glutinosa</i>	Threatened
	Sticky Goldenrod	<i>Solidago simplex</i> var. <i>gillmanii</i>	Threatened
	Sweet Coltsfoot	<i>Petasites sagittatus</i>	Threatened
	Thickspike	<i>Elymus lanceolatus</i> ssp. <i>psammophilus</i>	Threatened
	Tufted Club-rush	<i>Scirpus cespitosus</i>	Threatened
	Western Fescue	<i>Festuca occidentalis</i>	Threatened
<b>Terrestrial</b>	Cherrystone Drop	<i>Hendersonia occulta</i>	Threatened
<b>Molluscs</b>	Midwest Pleistocene Vertigo	<i>Vertigo hubrichti</i>	Endangered